

# TECHNICAL MEMORANDUM

## Utah Coal Regulatory Program

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April 25, 2005

TO: Internal File

THRU: Pamela Grubaugh-Littig, Permit Supervisor/Task Manager

THRU: Peter H. Hess, Environmental Scientist III/Engineer/Team Lead

FROM: Priscilla W. Burton, Environmental Scientist III/Soils

RE: Pace Canyon Fan Portal, Canyon Fuel Company, Dugout Canyon Mine,  
C/007/0039, Task ID #2193

### **SUMMARY:**

The application describes the construction of a fan portal and shaft in Pace Canyon. Total disturbance is 2.7 acres. The BLM land was previously disturbed by the Snow Mine (1906–1960's) and more recently by logging activity. Only those topsoils immediately adjacent to the roadway will be salvaged (1.3 acres of soil salvage). The salvage depth is approximately 18 inches and at that rate will yield 3,192 cu yds of topsoil. Baseline analytical information was sampled on April 1, 2004, but was not available from the laboratory for this review.

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**TECHNICAL ANALYSIS:**

**GENERAL CONTENTS**

**IDENTIFICATION OF INTERESTS**

Regulatory Reference: 30 CFR 773.22; 30 CFR 778.13; R645-301-112

**Analysis:**

Legal and financial information for Arch Coal mining is found in General Chapter 1, dated February 2005. (This information was last reviewed under Task # 2069.) The applicant and operator is Canyon Fuel Company, LLC (Section 112.200). The Resident Agent is C.T. Corporation Systems (50 W. Broadway; SLC, UT 84104). Canyon Fuel has offices in Colorado, a contact is provided in Section 112.200. A letter signed by Gene DiClaudio, President of Arch Western Bituminous Group, LLC, dated March 15, 2005, authorizes Erwin Sass and David Spillman as persons with signatory authority for the Dugout Canyon Mine.

The information provided in Section 111 and 112 of General Chapter 1 indicates that the Permittee (Canyon Fuel Co., LLC) is owned by Arch Coal and/or its subsidiaries, Figure 1A outlines the corporate structure. And section 112.100 indicates that Delta Housing Inc has a minor (1%) interest in the Arch Western Resources, LLC.

Officers and directors of Canyon Fuel Co., LLC, Arch Western Bituminous Group, LLC, Arch Western Resources, LLC and Arch Coal, Inc are found in Appendix 1-1.

Coal mining and reclamation operations related through corporate structure are listed in Table 1-1 and include the active sites: SUFCO, Skyline and Soldier Canyon mines and the Banning Loadout and reclaimed sites: Gordon Creek No 3 & 6, Gordon Creek No. 2, 7, & 8, and Huntington No. 4 mines in Utah.

**Findings:**

The information provided meets the regulatory requirements for legal and financial information.

## VIOLATION INFORMATION

Regulatory Reference: 30 CFR 773.15(b); 30 CFR 773.23; 30 CFR 778.14; R645-300-132; R645-301-113

### Analysis:

General Chapter 1 provides a three-year violation history in Table 1-2 for mines related by corporate structure (listed in Table 1-1).

### Findings:

The information provided meets the requirements of the regulations.

## RIGHT OF ENTRY

Regulatory Reference: 30 CFR 778.15; R645-301-114

### Analysis:

Right of Entry information is found in the Dugout MRP, Chapter 1, Section 114 and in Appendices 1-1, 1-3, and 1-4. The 2.7 acres of land to be disturbed for the Pace Canyon fan portal falls in E1/2NW1/4NW1/4 Sec. 30 T.13 S., R. 13 E. The road accessing the site is under the jurisdiction of the BLM, although it is not accessible to the public, as per email communication from the BLM Realty Specialist, Mark Mackiewicz to Stan Perkes (forwarded on March 3, 2005 to Pete Hess).

*“The Pace Canyon Road is noted in our 1980 Carbon County Road Maintenance Agreement. For maintenance purposes we consider the subject road county until it enters the NE1/4SE1/4 of section 25, T. 13 S. R. 12 E., therefore a public road as per definition noted below. From there onward the road then becomes a BLM system road. The road goes crosses two 40 acre parcels, one in section 25, the other in lot 2, section 30, T. 13 S., R. 13 E. (The road through these two parcels is not considered a public road [due to a locked gate at the entrance to the two parcels]). Any use of this road that would require maintenance (grading, drainage improvement, widening) would require a right-of-way from the BLM. The short-term use of the road without maintenance for access purposes to the fan site would not require right-of-way. Use would be required casual. “*

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During a technical site visit on April 1, 2005, the Permittee indicated that a right of way from the BLM will be obtained such that drainage and surface improvements can be made to the route.

### **Findings:**

Information provided in the application meets the requirements of this section of the regulations.

## **LEGAL DESCRIPTION AND STATUS OF UNSUITABILITY CLAIMS**

Regulatory Reference: 30 CFR 778.16; 30 CFR 779.12(a); 30 CFR 779.24(a)(b)(c); R645-300-121.120; R645-301-112.800; R645-300-141; R645-301-115.

### **Analysis:**

The legal description of the state and federal lease areas, fee land, BLM land, and BLM right of way are provided in section 114 of the MRP. The legal description of the BLM land disturbed for the Pace Canyon fan portal and shaft is found in Appendix 1-4.

The Division understands that at the location of the proposed 2.7-acre fan portal disturbance, the Pace Canyon road is under BLM jurisdiction, but has no public access due to a locked gate marking the end of county maintenance. [Email communication from the BLM Realty Specialist, Mark Mackiewicz to Stan Perkes (forwarded on March 3, 2005 to Pete Hess)]. The BLM road without public access is referenced in Section 521.100 of the application.

### **Findings:**

Information provided in the application meets the requirements of this section of the regulations.

## **PUBLIC NOTICE AND COMMENT**

Regulatory References: 30 CFR 778.21; 30 CFR 773.13; R645-300-120; R645-301-117.200.

### **Analysis:**

Public notice is not required for the Pace Canyon fan portal disturbance of 2.7 acres.

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However, no information was found in either General Volume 1 or the Dugout Canyon MRP for the site at all. Include previous public notice documentation in Appendix 1-2. This inadvertently was removed from the MRP during incorporation of General Volume 1. The Division and Canyon Fuel will try to locate copies of the public notice previously in the plan for the main mine facilities area.

### **Findings:**

Information provided in the application meets the requirements of this section of the regulations.

## ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

### **PERMIT AREA**

Regulatory Requirements: 30 CFR 783.12; R645-301-521.

### **Analysis:**

The permit area encompasses 7,111 acres (Section 114, Plate 1-1 and RA Plate 1-1). A legal description of the permit area is provided in Section 114 of the MRP.

Plate 1-4 illustrates the disturbed area. The disturbed area is currently 56.5 acres as itemized on page 1-9 and Appendix 1-4.

### **Findings:**

The information provided meets the requirements of the regulations.

## SOILS RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.21; 30 CFR 817.22; 30 CFR 817.200(c); 30 CFR 823; R645-301-220; R645-301-411.

### **Analysis:**

The soil survey of Pace Canyon was conducted by Dan Larsen of Environmental Industrial Services, Inc. (2003 BLM Environmental Assessment) and supplemented by additional

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test pits in November 2004. Photographs, test pit descriptions, and a soils map from the 2004 survey of Pace Canyon are found in Appendix 2-3. The Division confirmed the depth of topsoil along either side of the access road during a site visit on April 1, 2005. These deep soils with an 18-inch A horizon are on lesser slopes and cover approximately 1.3 acres (Appendix 2-9). The soils are Cryoborolls and are similar to the Senchert family or Croydon series soils.

### **Findings:**

The information provided meets the regulatory requirements of soil resource information requirements.

## **LAND-USE RESOURCE INFORMATION**

Regulatory Reference: 30 CFR 783.22; R645-301-411.

### **Analysis:**

The Fish Creek and Pace Canyon Mines that operated in the early 1900's are also located within the permit area. The site of the Pace Canyon fan portals is located at the former Snow Mine. The Snow mine became active in 1906 with largest output occurring between 1932-1940. The site was inventoried in 1980, but was not recommended for nomination to the historic register. A subsequent investigation of the site in 2001 revealed that the site had been destroyed by logging activity. Plate PC5-4 shows an access road through the fan portal site and indicates the pre-disturbance mine workings on the east side of the creek and the mine dumps within the disturbed area boundary on the west side of the creek.

The Thayn Trust Surface Use Agreement is included in Appendix 4-2. This agreement outlines the use of CFC owned surface, grazing allotments BLM #4079 and State #21722 and water rights by the Thayn's in exchange for surface use of the lands described in Exhibit A of the Agreement. Exhibit A indicates that all of Section 30 T 13 S, R 13 E is owned by the Thayn Trust, except lots 1 and 2 (which are U.S.A., BLM administrated properties, see Plate 1-1). The Thayn family trust also owns the rights to grazing in Pace Canyon Allotment #24085 as well as the lands above the Pace Canyon site. The holding corral for livestock (80 head) is located outside of the lease area, ½ mile downstream of the Pace Canyon fan portal site (Plate 4-1 and Section 411.130). The main watering source in the immediate area is Pace Canyon creek.

Appendix 4-2 contains the BLM (surface owner) comments concerning the post mining land use in Pace Canyon.

### **Findings:**

Information provided in the proposal meets the requirements of this section of the regulations.

## **OPERATION PLAN**

### **TOPSOIL AND SUBSOIL**

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

#### **Analysis:**

##### **Topsoil Removal and Storage**

In Pace Canyon, the soil survey indicates that variable soil depths (from 0 – 36 inches) are salvageable (Appendix 2-3). The soils map indicates that most of the proposed disturbed area is steep terrain that will not provide topsoil for salvage. Areas along either side of the existing road that have been either undisturbed or affected (but with no effect to soil pedology) will be the source of topsoil salvage. The MRP indicates in section R645-301-232.100 that soil recovery will be maximized and topsoil and subsoil will be salvaged and stored together. Consequently, the presence of a qualified person to direct the salvage is indicated. For the purposes of calculation, an average of 18 inches salvaged from 1.3 acres is assumed in Appendix 2-9. A salvage quantity of 3,100 cu yds was calculated for Pace Canyon. The topsoil will be sampled at the time of salvage for the parameters indicated in MRP Section R645-301-233.300.

##### **Topsoil Storage**

Soil will be removed from 1.3 acres of the 2.7-acre Pace Canyon site. The plan indicates that an average 12 inches will be salvaged from this 1.3 acres. However, the Division observed that there was a minimum of 18 inches available in this 1.3-acre area with subsoils available for salvage to an even greater depth. A greater depth of salvage is required for reclamation of the 2.7-acre site, since only a portion of the site will be supplying topsoil for the total site. At an average depth of 18 inches, the 1.3-acre topsoil retrieval area will supply 3,192 cu yds of soil.

Two small stockpiles will be located in Pace Canyon for reclamation of the fan portal (Appendix 2-9 and Plate PC5-2). These stockpiles will hold 640 and 566 cu yds. They will be constructed with 2h:1v side slopes (Appendix 2-9) and will be surrounded with a berm

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(Section 234.200). The remainder of salvaged topsoil will be hauled to the Dugout/Soldier Canyon topsoil storage site. Topsoil at Pace Canyon will also be temporarily stockpiled above the portal and along the channel diversion area for immediate replacement after construction of the portal and channel diversion (Plate PC5-2 and MRP section 242.100.) The site will be fenced to protect the topsoil stockpiles from grazing and to protect the livestock herd in Pace Canyon Grazing Allotment No. 24085.

### Findings:

The information provided meets the regulatory requirements of this section.

## HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

### Analysis:

#### **Acid- and Toxic-Forming Materials and Underground Development Waste**

Two coal mine waste piles remaining on the surface from the Snow Mine were sampled on April 1, 2005 for analysis as described in Section 513.400. This coal mine waste will be hauled to the Dugout Waste Rock site for final disposal.

Excavated material from shaft development will be used to develop the site pad, except that oxidized coal will be hauled to the waste rock site (Section 528.300) and for every 2000 cu yds hauled one sample will be taken for analysis as per section 536.200 of the Waste Rock Amendment Volume.

### Findings:

The information provided meets the regulatory requirements of this section.

## RECLAMATION PLAN

## POSTMINING LAND USES



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Regulatory Reference: 30 CFR Sec. 784.15, 784.200, 785.16, 817.133; R645-301-412, -301-413, -301-414, -302-270, -302-271, -302-272, -302-273, -302-274, -302-275.

### Analysis:

Roads exist (prior to current mining) through the permit and disturbed areas in Dugout and Pace Canyons. These roads will remain for the post mining land use. The plan says the Dugout Canyon road has a width of 16 to 25 feet within the disturbed area. The reclaimed road will also have a width of about 16 feet. The Pace Canyon road will be returned to its original location and have a width of 15 feet.

The Bureau of Land Management and State of Utah own the land in the disturbed area. Appendix 4-2 contains letters from the State and the BLM concurring with the post mining land use.

### Findings:

Information provided in the proposal is considered adequate to meet the requirements of this section of the regulations.

## TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

### Analysis:

#### Soil Redistribution

Soil will be replaced in all disturbed areas (except the road) in Pace Canyon (see Plate PC5-6). In Pace Canyon 1.5 acres will be revegetated. Soil stockpiled at the Pace portal site will be moved using a Cat D8 dozer. Soil Stockpiled at Soldier Canyon storage site will be loaded with the Cat 325 excavator and hauled using 12 CY dump trucks (Appendix 5-6 Reclamation Bond Estimate). [04/21/05]

### Findings:

The information provided meets the regulatory requirements of this section.

## STABILIZATION OF SURFACE AREAS

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Regulatory Reference: 30 CFR Sec. 817.95; R645-301-244.

**Analysis:**

Final reclamation treatments: topsoil depths, hay, gouged, mulched and seeded areas are described in Chapter 2. Extreme roughening is listed as one possible treatment for final reclamation on p 2-40. Also it is shown on Plate 7-5A as a main treatment for contemporaneous reclamation of the Pace Canyon site during operations. The extents of the reclaimed area in Pace Canyon are illustrated on Plate 5-6.

**Findings:**

The information provided meets the requirements for Soil Stabilization at the Pace Canyon site.

**RECOMMENDATIONS:**

Salvage of 18 inches reflects the average for Pace Canyon; however, 33 inches is anticipated in some locations. The possibility that the undisturbed slope above the fan portal will become unstable is real. In this instance, excess topsoil will be very useful for reclamation of that slope.

BLM authorization is required for any improvements to the drainage or surfacing of the Pace Canyon road.

Approval is recommended. A Division representative should be present at the site during soil salvage.